REMARKS

<u>Summary of the Office Action</u>

In paragraph 4, on pages 2-3 of the office action, the examiner states,

The indicated allowability of claim 10 is withdrawn in view of the Non-Statutory Subject Matter.

Claim 10 is directed to machine readable instructions embodied in "a signal bearing medium." The Specification of the Application (US Patent Application Publication 2005/0193239) further defines "a signal bearing medium" to include transmission media [or any other suitable signal-bearing media including <u>transmission media such as digital and/or analog communications links</u>, which may be electrical, optical, and/or wireless. For example, in some embodiments the instructions or code may be accessible from a file server over a network, or from other transmission media, and the signal bearing media embodying the instructions or code may comprise a <u>transmission media, such as a network transmission line, wireless transmission media, signals propagating through space, radio waves, and/or infrared signals</u> (paragraph 0024)].

The recited subject matter of "signal bearing medium" does not fall within a statutory category of invention because it is neither a process, machine, manufacture, nor a composition of matter. Instead, it is directed to a form of energy. Forms of energy do not fall within a statutory category since they are clearly not a series of steps or acts to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or

more substances to constitute a composition of matter.

In paragraph 5, on page 3 of the office action, the examiner states:

> The indicated allowability of claim 10 is withdrawn in view of the newly discovered reference (Reams, US 6,438,660).

In paragraph 7, on page 3 of the office action, the examiner states:

> Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Romine (US 6,442,604), and in view of Reams (US 6,438,660).

In this Amendment, the applicant has amended claim 10, and has added new claims 38-56. Support for the amendments can be found, for example, in the specification in paragraphs 25, 28, and 36. No new matter has been added. Claims 10, and 38-56 are now pending in the application.

Claim Rejections - 35 U.S.C. 101

As mentioned above, claim 10 was rejected under 35 USC 101. Herein claim 10 has been amended to recite a "computer readable medium", rather than a "signal bearing medium". Consequently, the applicant submits that claim 10 is directed to statutory subject matter, and that the rejection of claim 10 under 35 U.S.C. 101 should be withdrawn.

Claim Rejections - 35 U.S.C. 103

a. Legal Criteria 35 U.S.C. 103

"Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented."

Graham v. John Deere Co. of Kansas City, 383 U. S. 1, 17-18 (1966).

b. Discussion Regarding the 35 U.S.C. 103 Rejections

As mentioned above, in the office action claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Romine (US 6,442,604), and in view of Reams (US 6,438,660).

Claims 10, 55, and 56 are the independent claims currently pending in the application. The applicant submits that all of the independent claims as amended herein include limitations that are not described in the references, and that the claims are nonobvious in view of the references.

Claim 10:

Claim 10 as amended herein, includes at least the following limitations, for example, which are not described in the references:

> tracking data access patterns for blocks of the data;
>
> …
>
> wherein backing up the data includes storing with the data, data access pattern metadata obtained by tracking the data access patterns;
>
> …
>
> changing the block virtualization indicator to a value indicating that the data is available, after a sufficient quantity of the data has been written to the storage space, *wherein the quantity of the data that has been written to the storage space that is sufficient is a function of the access patterns of the data, and of a data type*;

Claim 55:

Claim 55 as amended herein, includes at least the following limitations, for

example, which are not described in the references:

> tracking data access patterns for blocks of the data;
>
> …
>
> wherein backing up the data includes storing with the data,
> data access pattern metadata obtained by tracking the data access
> patterns;
>
> …
>
> *changing the block virtualization indicator to a value*
> *indicating that the data is available, after only one block of the*
> *subset of the data has been written to the storage space*;

Claim 56:

Claim 56 as amended herein, includes at least the following limitations, for example, which are not described in the references:

> racking data access patterns for blocks of the data;
>
> …
>
> wherein backing up the data includes storing with the data,
> data access pattern metadata obtained by tracking the data access
> patterns;
>
> …
>
> changing the block virtualization indicator to a value
> indicating that the data is available, after a sufficient quantity of
> the data has been written to the storage space, *wherein the quantity*
> *of the data that has been written to the storage space that is*
> *sufficient is a function of the access patterns of the data, and of a*
> *data type*;

In conclusion, the applicant submits that all of the claims as presented herein are include limitations that are not described in the references, and are nonobvious in view

of the references.

Amendments, and Dependent Claims in General

The applicant submits that all of the dependent claims are novel and nonobvious for at least the reasons discussed above with regard to the independent claims. Some of the claim amendments in this amendment were made to clarify the wording and to correct typographical errors.

Conclusion

In summary, the applicant respectfully submits that the claims as presented herein are directed to statutory subject matter, and are novel and nonobvious. The applicant respectfully submits that the application is in condition for allowance, and the applicant requests reconsideration and further examination, and allowance of the application. Any additional fees required in connection with this amendment that are not specifically provided for herewith are authorized to be charged to Deposit Account No. 09-0466 in the name of International Business Machines Corporation.

Respectfully submitted,

/Tim Ellis/

Timothy N. Ellis
Reg. No. 41,734
Attorney for Applicant
telephone (858)455-7977